

# Contents Volume 75, 1989

## Research Papers

Oxygen isotope exchange kinetics of mineral pairs in closed and open systems: Applications to problems of hydrothermal alteration of igneous rocks and Precambrian iron formations R.T. Gregory (Clayton, Vic., Australia), R.E. Criss (Reston, Va., U.S.A.) and H.P. Taylor, Jr. (Pasadena, Calif., U.S.A.) .....	1
Geochemical evidence of pore-water advection along a fault in plastic sediments from the Southern Nares Abyssal Plain (western North Atlantic) D.E. Buckley (Dartmouth, N.S., Canada) .....	43
Geochemistry of colloidal silica precipitates in altered Grande Ronde Basalt, northeastern Oregon, U.S.A. M.L. Cummings, P.M. Trone and J.M. Pollock (Portland, Oreg., U.S.A.) .....	61
Back-arc with frontal-arc component origin of Triassic Karmutsen basalt, British Columbia, Canada F. Barker (Denver, Colo., U.S.A.), A. Sutherland Brown (Victoria, B.C., Canada), J.R. Budahn (Denver, Colo., U.S.A.) and G. Plafker (Menlo Park, Calif., U.S.A.) .....	81
Regional variations within the Paraná flood basalts (southern Brazil): Evidence for subcontinental mantle heterogeneity and crustal contamination E.M. Piccirillo (Trieste, Italy), L. Civetta (Napoli, Italy), R. Petrini (Pisa, Italy), A. Longinelli (Trieste, Italy), G. Bellieni (Padova, Italy), P. Comin-Chiaromonte (Palermo, Italy), L.S. Marques and A.J. Melfi (São Paulo, Brazil) .....	103
Synchrotron X-ray fluorescence analysis of rock-forming minerals. 1. Comparison with other techniques; 2. White-beam energy-dispersive procedure for feldspars F.-Q. Lu (Chicago, Ill., U.S.A.), J.V. Smith, S.R. Sutton, M.L. Rivers (Chicago, Ill., and Upton, N.Y., U.S.A.) and A.M. Davis (Chicago, Ill., U.S.A.) .....	123

## Book Reviews

<i>Ring Complex Granites and Anorogenic Magmatism</i> , by B. Bonin — H. Sørensen .....	145
<i>Advances in Soil Science</i> , Vols. 4 and 5, by B.A. Stewart (Editor) — P.W. Arnold .....	146
<i>Strategies and Advanced Techniques for Marine Pollution Studies: Mediterranean Sea</i> , by C.S. Giam and H.J.-M. Dou (Editors) — E.M. Levy .....	147
<i>Meteorites and Their Parent Planets</i> , by H.Y. McSween, Jr. — R.G. Strom .....	148

## Announcements

Gold 89 in Europe, International Symposium on Gold Metallogeny, Exploration and Beneficiation, Université Paul Sabatier, Toulouse, France, May 23-25, 1989 .....	151
ECROFI X, Imperial College, London, U.K., April 6-8, 1989 .....	152

<i>Editorial: Change of Editors</i> , by C.J. Allegre .....	i
---	---

## Research Papers

Small-scale variations and subtle zoning in granitoid plutons: the Liberty Hill pluton, South Carolina, U.S.A. J.A. Speer (Raleigh, N.C., U.S.A.), A. Naeem and A.A. Almohandis (Riyadh, Kingdom of Saudi Arabia) .....	153
The geochemistry of mercury in some coastal sediments from Sri Lanka A. Senaratne (Mainz, Federal Republic of Germany) and C.B. Dissanayake (Peradeniya, Sri Lanka) .....	183
Organic matter in Cretaceous chalks from eastern England N.R. Pacey (Aberdeen, Great Britain) .....	191
Natural and artificial maturation of coal: Hopanoid stereochemistry M. Monthieux (Pau, France) and P. Landais (Vandoeuvre-les-Nancy, France) .....	209

Organic petrology and geochemistry of intermontane coals from British Columbia, 3. The Blakeburn opencast mine near Tulameen, British Columbia, Canada F. Goodarzi (Calgary, Alta., Canada) and E. Van der Flier-Keller (Victoria, B.C., Canada) .....	227
<i>Discussion</i>	
Fingerprinting geological materials using SSMS — Comment K.P. Jochum and A.W. Hofmann (Mainz, Federal Republic of Germany) .....	249
<i>EAG News</i> .....	253
<i>Research Papers</i>	
Limits on chemical and convective isolation in the Earth's interior S.J.G. Galer (Cambridge, Great Britain, and La Jolla, Calif., U.S.A.), S.L. Goldstein (Mainz, Federal Republic of Germany) and R.K. O'Nions (Cambridge, Great Britain) .....	257
The Cretaceous-Tertiary boundary problem: An assessment from lead isotope systematics Aline Dia, G. Manhès, B. Dupré and C.J. Allègre (Paris, France) .....	291
A method for the quantification of bismuth and palladium in geological materials including Cretaceous-Tertiary boundary clays S.M. Wilson, M. Hoashi, R.R. Brooks and R.D. Reeves (Palmerston North, New Zealand) .....	305
Distribution of rare-earth and some trace elements in Tertiary phosphorites from the Senegal Basin and their weathering products C. Bonnot-Courtois (Dinard, France) and R. Flicoteaux (Marseille, France) .....	311
Concentrations en uranium et déséquilibres radioactifs Io-U en Méditerranée orientale - Discussion sur l'origine des sapropèles (Uranium concentrations and Io-U radioactive disequilibrium in the sediments from the East Mediterranean Sea - Origin of the sapropels) M. Bernat (Nice, France), A. Buscail, A. Monaco, H. Got (Perpignan, France) et B. Chassefière (Nice, France) ....	329
Organic geochemistry of surface sediments from the Huanghe estuary and adjacent Bohai Sea (China) M. Bigot, A. Saliot (Paris, France), X. Cui and J. Li (Qingdao, People's Republic of China) .....	339
<i>Erratum</i> .....	351
<i>Contents Volume 75, 1989</i> .....	353

